

LBNE BNL weekly meeting  
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# Software and Computing in 2014: a brief report

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# Overview

- ▶ Recent status reports for this group in 2014:
  - ▶ <https://indico.bnl.gov/conferenceDisplay.py?confId=941>
  - ▶ <https://indico.bnl.gov/conferenceDisplay.py?confId=921>
  - ▶ <https://indico.bnl.gov/conferenceDisplay.py?confId=858>
- ▶ We made real progress on priority items according to our plans, in 2014 – please see the links above for more detail – no need to repeat material:
  - ▶ Software Infrastructure
  - ▶ Geometry
  - ▶ Distributed Computing (Grid Processing, Data Distribution)
  - ▶ Documentation
- ▶ Other developments:
  - ▶ 35t is a priority.
  - ▶ Forum for Computational Excellence – B.Viren as a group co-convenor, Brett and Maxim contributors to the FCE report. HEP Software Foundation – B.Viren invited to participate.

# News: Core Software Infrastructure

- ▶ LBNE (Milind) and FNAL SCD (Panagiotis) agreed to form a standing “Readiness Assessment Team” to address both short term (35t) and longer terms issues and priorities and possibly identify ways where SCD can help.
- ▶ In-person meeting took place last week:
  - ▶ <https://indico.fnal.gov/conferenceDisplay.py?confId=9181>
- ▶ Oliver Gutsche is our SCD contact and he produced notes:
  - ▶ <https://www.dropbox.com/s/nea003ezenxyv4t/LBNE%20-%20Joint%20Assessment%20Team%20Meeting%20-%2010%20Dec%202014.pdf?dl=0>
- ▶ We’ll see what the results will be.
- ▶ Read Michelle’s notes. Salient point – we will depend on uBoone postdocs (and others) for software development since we have few postdocs of our own. For that reason, compatibility of APIs and updates in the LArSoft stack are critically important. Need SCD assistance in “policing” LArSoft code base to ensure compatibility of all experiments. Good will of developers was not enough up to this point and most don’t have time to deal with it.
- ▶ Please see the *White Paper* – Brett, Ben, Liz and Maxim as authors. Itemized issues with existing practices for code build and configuration (at FNAL), offered a solution (which required development effort on our part), hoping to reach agreement with SCD on acceptance. TBA.

# News: DAQ/35t

- ▶ Once again, despite Maxim pestering people everywhere, there is not enough information to design and document the Conditions DB.
- ▶ No clear documentation on the C++ interface to be implemented (Jon Paley). Reco team also needs to formulate requirements (Michelle).
- ▶ LAr TPC, PD, Muon Telescope, pulser calibrations will all need DB records for QA, validation and analysis.
- ▶ *I'm working to get a resolution for this.*
- ▶ As Giles proposed, important bits of information will be stored as FCL text in the DB, taking care of some portion of it.
- ▶ Brett and Maxim have been looking at the present design of Metadata for the 35t DAQ and analysis and we find it lacking.
  - ▶ DocDB 8093 (Qizhong Li)
  - ▶ <http://lbne2-docdb.fnal.gov:8080/cgi-bin/ShowDocument?docid=9950> – Brett's writeup.
- ▶ Artdaq is considered a success, SCD has been informed that we need ongoing support.

# ELBNF

- ▶ We proposed a small addition to the LOI to put S&C on the map for the new Collaboration. We don't want to introduce delays and/or inefficiencies into the already tight schedule and active R&D that needs to be done, and that critically depends on the Physics Tools and infrastructure for their distributed development and use (which depends on S&C).
- ▶ The task of keeping software organized and coordinated will likely become more (and not less) difficult in the new Collaboration due to potentially wider participation, need to understand and integrate a wider array of physics tools and general lack of manpower everywhere.
- ▶ I believe this needs to be clearly communicated to DOE so that we have enough momentum to carry us through this transitional period.